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| 09/521,845 | 03/09/2000 | Janos Szanyi | 1434A2 | 3769 |

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PPG INDUSTRIES INC
INTELLECTUAL PROPERTY DEPT
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PITTSBURGH, PA 15272

EXAMINER

PIZIALI, ANDREW T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1775

14

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/521,845

Applicant(s)

SZANYI ET AL.

Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45 is/are allowed.
- 6) ☒ Claim(s) 1-44 and 46-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-3, 6-11, 14-16, 18-23, 26-32, 35-38, 41, 49-53 and 58-60 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a breaker layer comprising a metal oxide doped with phosphorous and/or silicon, does not reasonably provide enablement for any conceivable "breaker layer" either presently existing or which might be discovered in future. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.
3. Claims 1-15, 18-41, 49-53 and 59-60 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a first and second coating surface (or layer) comprising a metal oxide, does not reasonably provide enablement for any conceivable first or second surface (or layer) either presently existing or which might be discovered in future. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.
4. Claims 42-44, 49-53, 57 and 61 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a color suppression layer comprising a gradient layer which transitions from one metal oxide or nitride to another, does not reasonably

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provide enablement for any conceivable color suppression layer either presently existing or which might be discovered in future. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

5. Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A substrate appears to be critical or essential to the practice of the invention. Unless there is some evidence that the layer can stand alone, the claim is incomplete in the absence of a substrate.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-3, 6-11, 14-16, 18-23, 26-32, 35-38, 41, 49-53 and 58-60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims set forth a physical characteristic desired in the breaker layer, but fail to set forth a specific composition(s) for the breaker layer. Claims merely setting forth a physical characteristic desired in article, and not setting forth specific compositions which would meet such a characteristic, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart the desired characteristic.

8. Claims 1-15, 18-41, 49-53 and 59-60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims set forth a physical characteristic

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(crystalline) desired in the first and/or second coating surface (or layer), but fail to set forth a specific composition(s) for the first and/or second coating surface (or layer). Claims merely setting forth a physical characteristic desired in article, and not setting forth specific compositions which would meet such a characteristic, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart the desired characteristic.

9. Claims 42-44, 49-53, 57 and 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims set forth a physical characteristic desired in the color suppression layer (suppresses color), but fail to set forth a specific composition(s) for the breaker layer. Claims merely setting forth a physical characteristic desired in article, and not setting forth specific compositions which would meet such a characteristic, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart the desired characteristic.

10. Claims 46-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims set forth a physical characteristic (refractive index) desired, but fail to set forth specific compositions for the layers. Claims merely setting forth a physical characteristic desired in article, and not setting forth specific compositions which would meet such a characteristic, are invalid as vague, indefinite, and functional since they cover any

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conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart the desired characteristic.

11. Claims 44 and 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how the thickness of the second layer can be “proportional” or “substantially proportional” to the thickness of the first layer. The dictionary definition of the word “proportional” is “Forming a relationship with other parts or quantities” or “Properly related in size, degree, or other measurable characteristics.” It is unclear what relationship the thickness of the second layer has with the thickness of the first layer. It is also unclear how the thickness of the second layer is related in size, degree, or other measurable characteristic to the thickness of the first layer. Appropriate correction is required.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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13. Claims 46-48 and 54-56 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,218,018 to McKown et al. (hereinafter referred to as McKown).

Regarding claims 46-48, McKown discloses numerous variations of depositing on a glass substrate a layer of tin oxide doped with fluorine and a layer of tin oxide doped with antimony (see entire document).

Regarding claims 54-56, McKown discloses that the coated article may comprise a substrate with a gradient layer deposited thereon comprising tin oxide doped with fluorine and antimony (column 7, lines 21-56 and Figure 3).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,218,018 to McKown.

McKown discloses that the coated article may comprise a substrate with a gradient layer deposited thereon comprising tin oxide doped with fluorine and antimony (column 7, lines 21-56 and Figure 3). McKown discloses that a color suppression layer may be deposited on the substrate according to the two layer assemblage provided by the present invention (column 5, lines 14-21). McKown does not specifically mention depositing the color suppression layer on the substrate of the gradient layer assemblage provided by the present invention, but it would

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have been obvious to one having ordinary skill in the art at the time the invention was made to include the color suppression layer in the gradient layer assemblage, because it may improve the color neutrality of the coated glass article.

Allowable Subject Matter

16. Claim 45 is allowed.

17. The following is a statement of reasons for the indication of allowable subject matter:

The closest art is USPN 6,218,018 to McKown, but McKown fails to teach or suggest the unexpected results of using the antimony doped tin oxide strata thicknesses claimed in claim 45 (see page 38, lines 1-25, of the current specification).

Response to Arguments

18. Applicant's arguments filed 4/14/2003 have been fully considered but they are not persuasive.

Claims 1-3, 6-11, 14-16, 18-23, 26-32, 35-38, 41, 49-53 and 58-60 still stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a breaker layer comprising a metal oxide doped with phosphorous and/or silicon, does not reasonably provide enablement for any conceivable "breaker layer" either presently existing or which might be discovered in future. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Claims 1-15, 18-41, 49-53 and 59-60 still stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a first and second coating surface (or layer) comprising a metal oxide, does not reasonably provide enablement for any conceivable

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first or second surface (or layer) either presently existing or which might be discovered in future. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Claims 42-44, 49-53, 57 and 61 still stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a color suppression layer comprising a gradient layer which transitions from one metal oxide or nitride to another, does not reasonably provide enablement for any conceivable color suppression layer either presently existing or which might be discovered in future. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Claim 17 still stands rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A substrate appears to be critical or essential to the practice of the invention. Unless there is some evidence that the layer can stand alone, the claim is incomplete in the absence of a substrate.

Claims 1-3, 6-11, 14-16, 18-23, 26-32, 35-38, 41, 49-53 and 58-60 still stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims set forth a physical characteristic desired in the breaker layer, but fail to set forth a specific composition(s) for the breaker layer. Claims merely setting forth a physical characteristic desired in article, and not setting forth specific compositions which would meet such a characteristic, are invalid as vague, indefinite, and functional since they cover any conceivable

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combination of ingredients either presently existing or which might be discovered in future and which would impart the desired characteristic.

Claims 1-15, 18-41, 49-53 and 59-60 still stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims set forth a physical characteristic (crystalline) desired in the first and/or second coating surface (or layer), but fail to set forth a specific composition(s) for the first and/or second coating surface (or layer). Claims merely setting forth a physical characteristic desired in article, and not setting forth specific compositions which would meet such a characteristic, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart the desired characteristic.

Claims 42-44, 49-53, 57 and 61 still stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims set forth a physical characteristic desired in the color suppression layer (suppresses color), but fail to set forth a specific composition(s) for the breaker layer. Claims merely setting forth a physical characteristic desired in article, and not setting forth specific compositions which would meet such a characteristic, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart the desired characteristic.

Claims 46-47 still stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

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applicant regards as the invention. The claims set forth a physical characteristic (refractive index) desired, but fail to set forth specific compositions for the layers. Claims merely setting forth a physical characteristic desired in article, and not setting forth specific compositions which would meet such a characteristic, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in future and which would impart the desired characteristic.

Claims 44 and 61 still stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear how the thickness of the second layer can be “proportional” or “substantially proportional” to the thickness of the first layer. The dictionary definition of the word “proportional” is “Forming a relationship with other parts or quantities” or “Properly related in size, degree, or other measurable characteristics.” It is unclear what relationship the thickness of the second layer has with the thickness of the first layer. It is also unclear how the thickness of the second layer is related in size, degree, or other measurable characteristic to the thickness of the first layer. Appropriate correction is required.

The applicant asserts that McKown does not mention the refractive indices of the antimony doped tin oxide layer or the fluorine doped tin oxide layer, and therefore, McKown does not read on claims 46-48. The examiner respectfully disagrees. The examiner asserts that McKown discloses an article comprising a substrate and a layer of fluorine doped tin oxide deposited over a layer of antimony doped tin oxide (column 7, lines 34-35 and column 6, lines 36-67). The examiner asserts that an antimony doped tin oxide layer has a lower refractive index

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than a fluorine doped tin oxide layer. The examiner directs the applicant to page 33, lines 7-9, of applicant's specification.

The applicant asserts that there is no disclosure in McKown of the invention currently claimed in claims 54-56. The examiner respectfully disagrees. McKown discloses that the coated article may comprise a substrate with a gradient layer deposited thereon comprising tin oxide doped with fluorine and antimony (column 7, lines 21-56 and Figure 3).

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (703) 306-0145. The examiner can normally be reached on Monday-Friday (7:00-3:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3822.



atp
May 1, 2003

Andrew T Piziali
Examiner
Art Unit 1775


DEBORAH JONES
SUPERVISORY PATENT EXAMINER